CURRICULUM VITAE

1. Resume

My name is **Refail Kasimbeyli**, born on 11 August 1960 in Azerbaijan. Until 2008, I published under the name **Rafail N. Gasimov**; this change reflects the adaptation of the Turkish spelling of my name following the dissolution of the Soviet Union. I am a **Professor of Mathematical Optimization and Operations Research** at **Eskişehir Technical University, Türkiye**. My research focuses on **nonconvex and nonsmooth global optimization**, and I am the founder of the **conical supporting surfaces approach** for investigating such problems. I have authored more than **100 scientific papers** in leading international journals, presented at over **100 international conferences**, and led more than 40 **funded research projects**. My current **h-index** is **21** in *Web of Science* and **27** in *Google Scholar*. (https://akademik.eskisehir.edu.tr/rkasimbeyli/makaleler)

Key contributions:

- 1992 – Introduced the weak subgradient, an extension of the classical subgradient in convex analysis, probably the first notion of subgradient capable of supporting the epigraph of a nonconvex function from below.
- 1999 – Developed a new duality theory in scalar optimization, proving optimality conditions and devising solution methods for nonsmooth and nonconvex problems.
- 2002 – Proposed an exact solution method for nonconvex constrained optimization, the first of its kind to generate a monotonically increasing sequence of dual values with guaranteed convergence to the optimum. This method, based on the sharp augmented Lagrangian duality scheme with zero duality gap, was later extended into hybrid forms applicable to a broad range of operations research problems.
- 2006 – Introduced the Polyhedral Conic Functions Method in data mining, later applied to numerous classification problems.
- 2009 – Defined the radial epiderivative, the first generalized derivative concept enabling the study of global optima in nonconvex optimization and extended the Rockafellar–Pshenichny theorem to the nonconvex setting.
- 2010 – Extended the Hahn–Banach separation theorem to nonconvex analysis by proving a nonlinear separation theorem using sublinear and superlinear functions, providing the first analytical framework for nonlinear separation in nonconvex setting.
- 2013 – Developed the conic scalarization method in nonconvex vector optimization.
- 2021 – Established a new duality theory in nonconvex vector optimization.
- 2025 – Proposed a novel solution method for nonconvex nonsmooth unconstrained optimization based on the radial epiderivative.

2. Awards and Distinctions

- Visiting professor at the Chongqing Normal University (China), from September 15th to December 15th, 2025.
- Grant from the Chongqing Normal University (China) to visit Professor Jianwen Peng, from December 15th to December 30th, 2024.
- Grant from the China Medical University and National Sun Yat-sen University (Kaohsiung, Taiwan) to visit Professor Jen-Chih Yao, September 2024.
- Plenary Speaker at the 5th International Conference on Problems of Cybernetics and Informatics, Baku, Azerbaijan, 28-30 August 2023.
- Grant from the Eskişehir Technical University to visit Professor R.T. Rockafellar at the University of Washington in Seattle, USA, July 2022.
- Grant from the Federation University Australia to visit the Faculty of Science and Technology during January - February 2018.
- Grant from the Institute for Research in Fundamental Sciences (IPM) to visit the School of Mathematics of IPM, August 2017.

- Grant from “The Thailand Research Fund” under the project The Royal Golden Jubilee PhD Program, Thailand, to be a guest speaker to deliver a series of lectures on “Continuous Optimization” and discuss the related research at the Department of Mathematics, Faculty of Science, Naresuan University, Thailand, December 2016.
- Grant B.14.2.TBT.0.06.01.03.220.01 from TUBITAK – The Scientific and Technological Research Council of Turkey to support the visit of Prof. Juan Enrique Martinez Legaz to Department of Industrial Engineering, Anadolu University, Turkey, for the collaboration on "Optimality conditions in nonconvex constrained optimization in terms of weak subgradients", November 2014.
- Grant from Universitat Autonoma de Barcelona (Spain) to visit Prof. Juan Enrique Martinez Legaz, for supporting the collaboration on “Optimality conditions for nonconvex constrained problems in terms of weak subdifferential”, September 2014.
- Grant EI 821/2-1 from DFG (Germany) to Support the Initiation of International Collaboration on “Proper optimality, scalarizations and variational inequalities for vector optimization problems with a variable ordering relation”. August 2012, Technische Universitat Ilmenau, Germany.
- Visiting Professor at the Centre for Informatics and Applied Optimization (CIAO), at the School of Information Technology and Mathematical Sciences, at the University of Ballarat in Victoria, Australia, August - September 2008.
- Visiting Professor at the University of South Australia, Adelaide, Australia, August – September 2003.
- Visiting Professor at the University of Ballarat, Ballarat, Australia, September 2003.